

**Remarks  
of  
Admiral James D. Watkins (Ret.)  
at the  
Joint Subcommittee on Ocean Science and Technology  
Public Workshop  
for the  
Development of the Ocean Research Priorities Plan**

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**Setting the Stage:**

I am pleased to participate in this workshop since its objective is very consistent with the course of action recommended by the US Commission on Ocean Policy and represents real progress towards a major recommendation put forward by the Commission. Part VIII of our final report, titled “***Science-Based Decision: Advancing Our Understanding of the Oceans***,” contains four chapters reflecting what we felt were the core components of the ocean science enterprise, these being:

- (Ch. 25) Creating a National Strategy for Increasing Scientific Knowledge,
- (Ch. 26) Achieving a Sustained Integrated Ocean Observing System,
- (Ch. 27) Enhancing Ocean Infrastructure and Technology, and
- (Ch. 28) Modernizing Ocean Data and Information Systems.

Chapter 25 is particularly relevant to today’s discussion given that its second recommendation calls for development of a “*national ocean and coastal research strategy that reflects a long-term vision and promotes advances in basic and applied ocean science and technology.*”

I will also note that our first recommendation in chapter 27 calls on what is now the President’s Committee on Ocean Policy to “*develop a national ocean and coastal infrastructure and technology strategy*”. These two initiatives need to occur in tandem, and it is my fondest hope that your final document will respond effectively to both of these recommendations. While data management and scientific infrastructure may not be “hot button” interest items to the uninitiated, they are the “glue” that can bind all stakeholders together to achieve a sustainable, strong ocean science enterprise. Some call data the “currency” of ocean policy.

The Commission placed great importance on enhancing the ocean science enterprise and development of a comprehensive research strategy as one cornerstone of this enterprise.

Developing and implementing a strategy that integrates activities across core areas supporting ocean research is crucial if we are to develop and implement a new and coherent national ocean policy. This will require the final strategy to address not only science, but equally important, a new governance process which breaks away from the dysfunctional bureaucracy of the past and efficiently supports the science. I hope this dual-track approach is not overlooked in the development of your final document.

As many of you are aware Leon Panetta –the Chair of the Pew Oceans Commission-- and I, and our respective commissioners, working under the bipartisan Joint Ocean Commission Initiative, recently issued an “Ocean Policy Report Card.” The card graded the nation, as a whole –including the Administration, Congress, states, and the nongovernmental community— on our progress in a number of key core few areas, one of which was “Research, Science and Education, to which we assigned a “D.” The rationale provided for this poor grade was the lack of a coherent national ocean and coastal research strategy; generally stagnant funding supporting the research; and no coherent national ocean education strategy. Other than this we’ve done a hell of a job.

Your effort in developing the plan at this workshop to take on these core areas should go a long way towards addressing the concerns raised in the report card. Further, a good plan will provide the justification needed to act on the Commission’s other major recommendation in this part of our report, for example, to double today’s totally inadequate –i.e., \$650 million— basic ocean research funding. While there will be significant benefits to developing a research plan and implementation strategy, the future light of expectation on the entire ocean community will dim significantly if the fully justified additional funding is not secured. Thus, your plan should be guided by a forward-looking vision that responds to future challenges and requirements and not be constrained by the same old tiresome call for only no-cost or low-cost recommendations, despite the very real and difficult fiscal environment facing the nation. Today’s status quo funding has been proven unsatisfactory by two independent Commissions and, if not rectified, can only exacerbate the myriad of extant ocean and coastal problems plaguing the nation. Such an outcome will only further accelerate the degradation of natural resources in the coming years.

### **Ocean Research Priorities Plan and Implementation Strategy**

Now I would like to turn my attention to the important matter of the content of your plan and its implementation strategy. I see three main goals of the Ocean Research Priorities Plan and Implementation Strategy.

First goal: the research plan must provide a vehicle for exciting public and political interest, and offer people a compelling reason for dedicating greater public and private resources to exploring, understanding and monitoring our oceans, coasts and Great Lakes. It must provide an inspirational vision that will generate the level of support and interest like that NASA has succeeded in garnering for its space-related programs, or like that the recent National Academies’ report “Rising Above the Gathering Storm” has done for the physical sciences and education related reform.

The ocean community must market their research plan and implementation strategy as complementary to NASA’s space-focused programs, i.e., an ocean-focused mission on

this planet that can balance the mission of going to Mars. It must also carve out a role within the President's "American Competitiveness Initiative," clarifying the benefits that the biological and ecological communities can bring to the new national charge to advance our research and science education capabilities.

Goal number two: the challenges facing our nation and its ocean-related resources must be clearly identified, and the path to understanding and responding to these challenges -- including the societal benefits that will be derived from the dedication of resources to this effort-- must be clearly articulated. I recognize that the formal strategy developed by the ocean science community will need to offer a level of detail that can be used by the federal agencies to justify budget requests to OMB. However, you should also consider looking for a way to use the seven themes and three cross-cutting themes in your draft ocean research plan as the basis for identifying and supporting a handful of high-profile, broad-based initiatives that all members of the community can recognize and support. From my experience it is clear that we need to provide a vision that Congress and the public can grasp and champion, and a 40-page research document presented to a scientific and ocean illiterate public will not do this. The research must back up a larger vision, and it is such a vision that will provide the needed excitement and momentum to move the ocean enterprise off "top-dead-center."

I realize that this is much easier said than done. The US Commission on Ocean Policy report was over 500 pages long, contained 212 recommendations, and took three years to complete. While we boiled our message down to the mantra of transitioning towards ecosystem-based management through changes in governance, science and education, marketing this very general message has proven most difficult. As a consequence, it is incumbent upon the ocean community to take the recommendations provided in the Commission's report, as well as the document that is being developed here over the next three days, and focus on two or three initiatives that are packaged in such a manner as to raise public awareness and support for ocean science. I will offer my personal suggestions about what these initiatives might be in a moment.

The third goal, and one I consider the most critical of the three, is the need to unify the ocean community behind a common research plan and implementation strategy. We are in an increasingly competitive world where a plethora of competing national issues are demanding public and political attention and increasing fiscal resources. The substantive science and management concerns, as well as the financial needs of the ocean community, have lost visibility and traction due in large part to the lack of unified support from the community for the core elements of a national ocean policy. We are a very diverse community with competing interests. Support and funding for ocean-related activities has always been tight and competition for these funds is often fierce. But, we have been unwilling and unable to put our individual interests aside to develop a focused set of priorities and an implementation strategy that will allow our collective interests to be recognized and acted upon at the highest levels of government and industry. This must change, abruptly, if we are to generate the momentum and funding needed to support even existing let alone emerging ocean-related initiatives. No one agency or entity can meet this challenge working alone. We must build on and strengthen partnerships across governmental agencies and with academia, states, industry and other nongovernmental entities if we are to succeed in elevating ocean-issues in the public and

political realm, all of which reinforces the need for the research plan to address the governance as well as the technical needs of the science community.

A point worth emphasizing, which I believe everyone in the room understands, is that inherent in this call for unity is the recognition that the research plan and implementation strategy cannot identify all current programs and activities as being of the highest priority. Given how far the ocean community is lagging behind other existing science-related initiatives, such as NASA's space exploration initiative, or the President's competitiveness initiative, we must make strategic and tactical decisions to identify and support a small number of very high priority areas that provide the greatest benefit to the entire ocean stakeholder community. The fate of the ocean community rests on its ability to overcome the challenges associated with its diversity of interests, and harness this diversity in a new visionary way to build a coalition capable of speaking with a single voice.

### **Big Initiatives**

I want to shift gears now and return to my earlier comment that we need to identify a few, high-priority, high-visibility initiatives that hold the greatest potential for communicating a compelling vision, generating public and political support, while providing the greatest benefit to the diverse ocean community. From the research community perspective, I see three strong candidates:

- Ocean Exploration
- An Ecosystem Research Initiative
- An Integrated Ocean Observing System

Let me address these one at a time:

Ocean exploration has already proven its capability to capture the public's attention and provides a compelling reason for committing resources to ocean research. As discussed in your draft plan's cross-cutting theme of "Basic Understanding of the Ocean," exploration is a broader concept than visiting unexplored areas, but includes advances in our understanding of processes from the atomic and molecular level, to the regional and global-levels. We can also marry curiosity-driven, basic research associated with exploration with more practical applied research needs, providing the excitement of discoveries of new species, drugs or geological processes, along with information that provides important societal benefits, such as improved understanding of the impact of climate change on all marine ecosystems, which include humans.

Second, we should also consider developing an "ecosystem research initiative." This initiative would integrate ongoing basic and applied ecosystem research across the spectrum of federal agencies currently engaged in such research. With growing recognition of the need to transition towards ecosystem-based management, the consolidation of ecosystem-related research activities under a broad interagency cross-cutting initiative --perhaps modeled on the Climate Change Research Program-- would provide the ocean community with a vehicle for a new budget initiative that would be well justified and would have broad support in the ocean community.

Finally, the research plan and implementation strategy should be directly linked to the implementation of an Integrated Ocean Observing System (IOOS). From NSF's basic research-driven Ocean Observatories Initiative; through applied research that provides the basis for development and dissemination of information and products needed by managers and decision maker; to outreach and education, IOOS offers a continuum of opportunities to integrate nearly all key elements of a comprehensive ocean policy. Congress, the Administration, and the Governors have all stated their support for IOOS as the missing link in the Administration's commitment to the Global Earth Observing System of Systems. We must capitalize on this support, starting with a research strategy that is clearly tied to implementing an Integrated Ocean Observing System --one area where we desperately need America's great industrial might to be applied.

### **Concluding Remarks**

Let me conclude by stating that I realize that the three initiatives mentioned above merit greater discussion, which I hope will occur over the next three days. However, my main point is the need for this group to develop its recommendations with an eye towards casting them within the context of initiatives that will generate broad support at every level of ocean stakeholder leadership. I cannot overemphasize the need for the ocean community to commence building a coherent coalition that speaks with unity in support of a few broad initiatives if we expect the nation to adopt a new and comprehensive national ocean policy. This is not an unrealistic expectation, but will require a concerted effort by all in the ocean community to discard the old way of doing business, isolated program-by-program, and focus on a set of broad, visionary priorities that can capture the public's attention as well as decision makers at all levels. If we can do this, then the current ebb tide of ocean investment and interest will stop and the flood tide will begin.

The members of both ocean commissions are counting on a unified ocean research community at this workshop to "kick-start" a new ocean research strategy and implementation plan that can surely be the genesis of the visionary ocean renaissance we are all eagerly seeking.